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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,539	12/18/2000	Ching-Fang Lin	USP1050A-GNC	8381
30265	7590	03/20/2006	EXAMINER	
RAYMOND Y. CHAN 108 N. YNEZ AVE., SUITE 128 MONTEREY PARK, CA 91754			ZANELLI, MICHAEL J	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/740,539	Applicant(s) LIN ET AL.	
	Examiner Michael J. Zanelli	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2000 and 04 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-107 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-107 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 and 04 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is responsive to the communication received on 1/4/06 supplying the missing drawings. It is noted that these drawings find support in applicant's provisional application.
2. With regards to applicant's priority claim as a CIP of S.N. 09/704,211 inserted on page 1 of the specification (amendment rcvd. 1/4/06), since the instant application is a utility application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 120 within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. Claims 33, 40-90 and 103-107 are objected to because of the following informalities:
 - A. As per claims 33, 40, 47, 54, 61, 68 and 75, "determining" should be --determine--.
 - B. As per claims 41, 48, 55, 62 and 69, delete extraneous "of" (line 1).
 - C. As per claim 103, insert period at end of claim.
 - D. All claims depending from an objected base claim are also objected to as containing the same deficiencies.
5. Claims 1-90, 94-101/91,93 and 102-107 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - A. As per claim 1, it is unclear at lines 12-15 whether "said self-contained/interruption-free positioning data" is referring to the unimproved or "improved" positioning data (see for example steps e and f of corresponding method claim 91).
 - B. As per claim 14, "said navigation processor" lacks antecedence (see claim 2).
 - C. As per claims 29, 36, 43, 50, 57, 64 and 71, "said inertial *integration* algorithm module" lacks antecedence.
 - D. As per claims 31, 38, 45 and 66, "said GPS data" lacks antecedence.

- E. As per claims 33, 40, 47, 54, 61, 68 and 75, “said current interval”, “said previous interval”, “said system velocity magnitude” and “said system attitude magnitude” lack antecedence.
- F. As per claims 34, 41, 48, 62, 69 and 73, “said digital data type” lacks antecedence.
- H. As per claim 79, “said vehicle” (line 7) lacks antecedence.
- I. As per claim 80, “said high frequency signals” (line 14) lacks antecedence.
- J. As per claim 84, “said amplified ... from said angular amplifier circuit” and “said acceleration amplifier circuit” lack antecedence (see claim 85).
- K. As per claims 94, 100 and 101, “said GPS positioning data” lacks antecedence relative to base claims 91 and 93.
- L. As per claim 97, “said GPS receiver” lacks antecedence relative to base claims 91 and 93.
- M. As per claim 102, “said GPS rover raw measurements” and “said GPS processor” lack antecedence relative to base claims 91 and 93. Also “said data link” lacks antecedence.
- N. As per claim 103, “said GPS rover raw measurements” and “said GPS processor” lack antecedence relative to base claims 91 and 93.
- O. As per claim 104, the following terms lack proper antecedence: “said first time epoch”, “said estimator bank”, said rover position”, “said weight bank”, “said rover velocity”, “said second time epoch”, “said last time epoch”, “said individual rover position”, “said associated weight”, “said least-squares estimated method” and “the

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process”. Also the claim is indefinite at (b.1.2.7) because it recites both a broad limitation (“the process”) followed by a narrower limitation (“(i.e., steps (b.1.2.1)-(b.1.2.7))”).

P. As per claims 105 and 106, “said previous time epoch” lacks antecedence.

Q. As per claim 107, “said corresponding cofactor matrix” lacks antecedence.

R. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-107 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-89 of U.S. Patent No. 6,415,223. Although the conflicting claims are not identical, they are not patentably distinct from each other. For example, application claim 1 is directed to a “self-contained/interruption-free positioning system for a user on earth” whereas patented claim 1 is directed to a “interruption-free positioning

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system for a user on land". The elements comprising both these systems are essentially identical. These claims are not patentably distinct in that the term "hand-held" can be interpreted as a type of "self-contained" device whereas "use on earth" would include "use on land". The method of application claim 91 and at least the method of patent claim 68 set forth like similarities. The dependent application claims and the remaining independent/dependent patent claims recite similar or identical subject matter and are therefore not patentably distinct from each other.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 14, 20, 21 and 91-93, as best interpreted given the deficiencies noted above, are rejected under 35 U.S.C. 102(e) as being anticipated by Breed et al. (6,370,475).

A. As per claims 1 and 91, Breed discloses a system (Fig. 7) and method which includes: an IMU (54), positioning assistant (44), a navigation processor (48), wireless communication device (58) and may further include a map database and display means (col. 42, lines 29-44). The system determines accurate position information by combining the IMU and positioning assistant position information and may communicate the information to others using the communication device (col. 53, lines 32-36).

B. As per claims 14, 20, 21, 92 and 93, as above whereby the positioning assistant may take the form of a GPS receiver and may further use differential correction

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information to produce more accurate location information (col. 50, lines 45-50; col. 53, lines 6-7).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited documents are of general interest.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (571) 272-6969.

The examiner can normally be reached on Monday-Thursday 8:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/mjz


MICHAEL J. ZANELLI
PRIMARY EXAMINER